

IN THE DRAWINGS

Please delete sheets 1, 2, 4 and 5 of the originally filed drawings and replace with the corresponding Replacement Sheets submitted herewith.

Attachment: Replacement Sheets

REMARKS

Claims 1 through 20 remain pending herein with the present amendments. The drawings and specification are amended herein and applicants submit that they fully address the objections thereto in the Office Action. It is submitted that no new matter is introduced also by way of the present amendments. Applicants submit that the presently amended claims overcome the objections and rejections thereto under 35 U.S.C. §112.

In the Office Action, the Examiner rejected all claims as being obvious over U.S. Patent No. 5,272,427 to Nold et al. ("Nold"), in view of U.S. Patent No. 5,841,992 to Martin ("Martin"), or as obvious over *Nold* in view of *Martin* and further in view of U.S. Patent No. 5,321,323 to Lehmann ("Lehmann"). In addition, some claims were rejected as being obvious over *Nold*, in view of *Martin* and further in view of U.S. Patent No. 4,283,007 to Bramow et al ("Bramow"). For the reasons set forth below, applicants respectfully submit that the presently amended claims are fully distinguished from these cited references. Reconsideration and allowance of all claims are respectfully requested.

In an interface circuit in accordance with an embodiment of the invention recited in claim 1, AC voltage signals are input to RS232 receivers. Based on these input signals, the RS232 receivers produce signals for input to a microprocessor at a microprocessor logic operating voltage. In this way, the microprocessor is operable to detect a change of state in the AC voltage input signal. No reference of record in this application teaches or suggests this feature. This conclusion is undisputed as no reference was cited under 35 U.S.C. §102 as anticipating claim 1.

The use of RS232 receivers in this unconventional manner for converting between AC voltage signals and a

microprocessor logic operating voltage confers unique benefits to the interface circuit. Through use of the RS232 receivers, the microprocessor receives signal inputs at a voltage level for which it is designed. As discussed at paragraph [0048] and [0056] of applicants' specification, RS232 receivers detect the sinusoidal AC voltage input signals while filtering and conditioning the signal so that the microprocessor can accurately and consistently detect the status of the AC voltage input signal. In addition, as further discussed at paragraph [0056] and [0061] of applicants' specification, RS232 receivers operate with hysteresis in relation to a sinusoidal AC voltage input signal, such that the signals input to the microprocessor only transition after the AC voltage input signal has clearly transitioned. This avoids the microprocessor from detecting false transitions in the input signals due to noise disturbance in the AC voltage input signals.

The invention claimed in claim 1 is clearly distinguishable from *Nold* and *Martin* and other combinations of references used by the Examiner to reject the claims.

Martin merely describes a well-known use of an RS232 receiver in serial data communications for receiving transmitted digital signals. *Martin* neither teaches nor suggests use of the RS232 receiver to conditioning a sinusoidal AC voltage input signal for input to a microprocessor at a logic operating voltage level such that the microprocessor is operable to detect a change of state in the AC voltage input signal.

The purpose of the system described in *Nold* is to synchronize a microprocessor to an AC voltage power line (see, e.g., col. 1, lns. 55-62). In the system described in *Nold* an AC voltage wave (e.g. the 24 VAC transformer common voltage) is applied to an interrupt input (IRQ input) without first converting the AC voltage to a microprocessor operating logic level (col. 6, lns. 6-8).

Moreover, neither *Lehmann* nor *Bramow* supply the teachings which *Nold* and *Martin* lack with respect to the invention recited in claim 1. Clearly, none of the cited references teaches or suggests use of RS232 receivers for signal conditioning between AC voltage signals and input terminals of a microprocessor as recited in claim 1.

Claim 16 contains similar recitations and is submitted to be distinguished from the cited references on at least the same basis as claim 1.

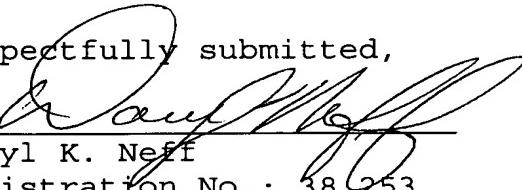
Support for the present amendments is indicated above, and otherwise provided at paragraphs [0041] through [0064].

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: January 25, 2006

Respectfully submitted,

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